



### ***The Number and Range of Defendants Have Also Increased Sharply***

- **Our list of defendants includes more than 6,000 firms**
  - Increasing number of defendants outside the asbestos and building products industry
  - Both large and small businesses
- **At least one company in nearly every U.S. industry (at the two-digit SIC level), now involved in litigation**
- **By 1998, nontraditional defendants account for more than 60% of asbestos expenditures (confidential study)**

A3823-49 08/02 RAND

Because most of the traditional defendants are in bankruptcy and are not making payments any more, the litigation has moved on to a wide variety of new defendants. The number of defendants typically named in claims is growing as well.

The initial RAND study of asbestos costs and compensation (Kakalik et al., 1983) found the list of defendants named on asbestos claims included approximately 300 firms. As the litigation has continued, the number of companies named by asbestos claimants has grown dramatically. A number of defendants, insurers, and plaintiff and defense attorneys have provided lists of asbestos defendants to us on a confidential basis. We have worked through the lists provided us to combine related corporate entities—subsidiaries, branches, divisions, and so on. To date, we have identified over 6,000 entirely independent entities that have been named as defendants on an asbestos personal injury claim.

Asbestos defendants span the full range of American business. Many are large corporations with thousands of employees and billions in revenues. Others are firms with as few as 20 employees and just a few million dollars in annual revenues.

The litigation has spread to virtually all parts of the U. S. economy. The U. S. Department of Commerce uses the Standard Industrial Classification (SIC) system to categorize economic activity for statistical purposes. The SIC system is hierarchical. All types of economic activity are divided into a small number

of very broad categories with narrower subdivisions. Every business in the United States is assigned an SIC code according to its primary activity. The firms on our current list of defendants fall into 75 different SIC categories at the 2-digit level. The SIC system divides the entire U. S. economy into 83 industries at this level. In other words, this litigation has spread to touch firms in industries engaged in almost every form of economic activity that takes place in the American economy. The incidence of litigation is very spotty in some areas—with only a handful of defendants in some codes—and heavy in others. But the point is that the litigation has spread well beyond the asbestos-related manufacturing and installation industries where it first began.

Nontraditional defendants are also paying an increasing share of the costs to resolve asbestos injury claims. A confidential study of asbestos costs reports that, by the late 1990s, nontraditional defendants accounted for about 60 percent of asbestos expenditures. In contrast, according to this report, in the early 1980s, traditional defendants accounted for about three-quarters of expenditures. This study was performed for a private client by a respected analyst who has had extensive experience in the asbestos area, and whose work was cited to us by plaintiff and defense attorneys alike. We discussed both the analysis and the data on which it was based with the analyst and determined that the work was analytically sound.

Given the number of major defendants that have filed for bankruptcy since 1998, it seems likely that the nontraditional defendants' share of the costs to resolve asbestos injury claims is substantially higher today.



## ***What's Going on Today?***

	1982	Today
<b>Number of claimants</b>	<b>21,000</b>	<b>600,000</b>
<b>Number of defendants</b>	<b>300</b>	<b>6,000</b>
<b>Total costs to date (nominal \$)</b>	<b>\$1 B</b>	<b>?</b>
<b>Bankruptcies</b>	<b>3</b>	<b>?</b>
<b>Estimated future costs (nominal \$)</b>	<b>\$38 B</b>	<b>?</b>

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In 1982, people were shocked to learn that over 21,000 claimants had filed claims for asbestos-related injuries and that the litigation had spread to about 300 defendants. Today, we believe that through the year 2000 over 600,000 claimants had filed against about 6,000 defendants.



## ***Dimensions of the Litigation***

- Claims
- • Costs and compensation
- Economic effects
- Future outlook

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## ***Estimated Total Costs of Resolving Asbestos Claims Through 2000: \$54 B***

- Publicly available data are very limited
- We estimate total outlays of \$54 B through 2000
  - U.S. insurers \$22 B
  - Insurers outside U.S. \$8–\$12 B
  - Defendants \$20–\$24 B
- At least 5 major companies have each spent more than \$1 B on asbestos litigation

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There are no publicly available estimates of the total amount spent on asbestos litigation, and the data needed to develop an estimate are not publicly available. We obtained confidential data and the results of proprietary studies from a variety of sources. Based on these data and analyses, we estimate that approximately \$54 billion has been spent on asbestos litigation through 2000. That includes what defendants have spent compensating claimants and paying their loss adjustment expenses, i.e., their transaction costs.

As noted earlier, we combined data provided on a confidential basis from a large number of defendants and trusts to estimate the number of claims for each type of claim (mesothelioma, other cancer, or nonmalignant) filed in each year through 2000. We used these data to estimate the distribution of time-to-disposition for all defendants combined for each type of claim. The defendants and trusts who provided these data to us generally told us they believe they do not systematically settle claims against them faster, or slower, on average, than other defendants. In our interviews with other participants in the litigation, we asked if they could suggest defendants or trusts who they thought were particularly quick, or slow, to settle claims. While a variety of entities were discussed in these conversations, the defendants and trusts in our database were not often mentioned. We assume these distributions are representative of the distribution of time-to-disposition by type of claim for all defendants and trusts. We multiplied our estimates of the numbers of claims filed each year for each type of claim by our estimates of the distributions of time-to-disposition for

each type of claim. The resulting estimates are equivalent to estimates of the numbers of claims of each type settled each year.

We then estimated the total costs of claims of each type in each year. Total costs include both the amounts paid a claimant of each type by all defendants combined and defendants' transaction costs. We began with RAND's estimates of the average costs per claim in 1982 by type of claim (Kakalik, 1983). We then estimated the corresponding total costs per claim by type in 2000. (We received assistance from analysts at Tillinghast-Towers Perrin, a leading actuarial consulting firm, in estimating the year 2000 total costs.) We computed the average annual rate of increase in costs per claim for each type of claim between these two estimates and used these rates to estimate the cost trends from 1982 through 2000. We have no reason to believe that the costs of claims for each type of claim grew smoothly over that period. Costs undoubtedly grew more rapidly in some years than in others. However, the average of the estimates of costs by year we developed by smooth interpolation between 1982 and 2000 should be close to the average of the true costs over that period.

We multiplied our estimate of the number of claims by type of claim filed in each year over the period 1982–2000 by the corresponding estimates of ultimate costs per claim by disease type and year and the distribution of time-to-disposition. The result is an estimate of the total costs defendants incurred in each year on the claims of each type filed in each year. We added these estimates for the years 1983 through 2000 to the RAND estimate of total costs of asbestos litigation through 1982 to obtain an estimate of the total costs of asbestos litigation through 2000. Our estimate is \$54 billion.

Analysts at Milliman USA, another leading actuarial consulting firm, have independently developed estimates of the total costs of asbestos litigation through 2000. They have told us our estimates were consistent with theirs. We also discussed our estimate with representatives of several major reinsurance companies. None of those we interviewed expressed strong reservations about our results. Some thought we might be somewhat high; others thought we were somewhat low. But none thought our estimate was very far off.

U.S. insurance companies are required to list their cumulative net paid losses, including loss adjustment expenses, in their annual statements. A. M. Best has collected and collated these data. They report that U. S. insurers have spent about \$21.6 billion on asbestos claims through 2000 (Altonji, Horvath & Simpson, 2001).

Based on conversations with both U. S. and foreign insurance companies, we believe foreign insurers have spent \$8 to 12 billion through 2000, over half of which has been assumed by London. Milliman estimates that foreign insurers have spent \$7 to 10 billion on asbestos litigation to date (Bhagavatula, Moody & Russ, 2001, p. 86).

U.S. defendants have spent from \$20 billion to \$24 billion on asbestos litigation through 2000. In their bankruptcy filings and related documents, corporations filing for bankruptcy have reported expenditures (including costs recovered from insurance) ranging from \$450 million to \$5 billion. We are aware of at least five defendants who have each spent more than a billion dollars apiece. Out of more than 6,000 defendants, only a relatively small number have spent such large amounts. A very much larger group of defendants has spent relatively small amounts, but in the aggregate they add up to several billions of dollars.



## ***Verdicts Are Infrequent but Attract Great Attention***

- **Since 1993, out of hundreds of thousands of claims, few have been tried to verdict**
  - **527 trial verdicts**
  - **1,598 plaintiffs reaching verdict**
- **Plaintiffs won two-thirds of the time**
  - **Mesothelioma plaintiffs were most successful**
- **Most claims were tried in groups**
  - **In most trials, juries heard a small number of claims**

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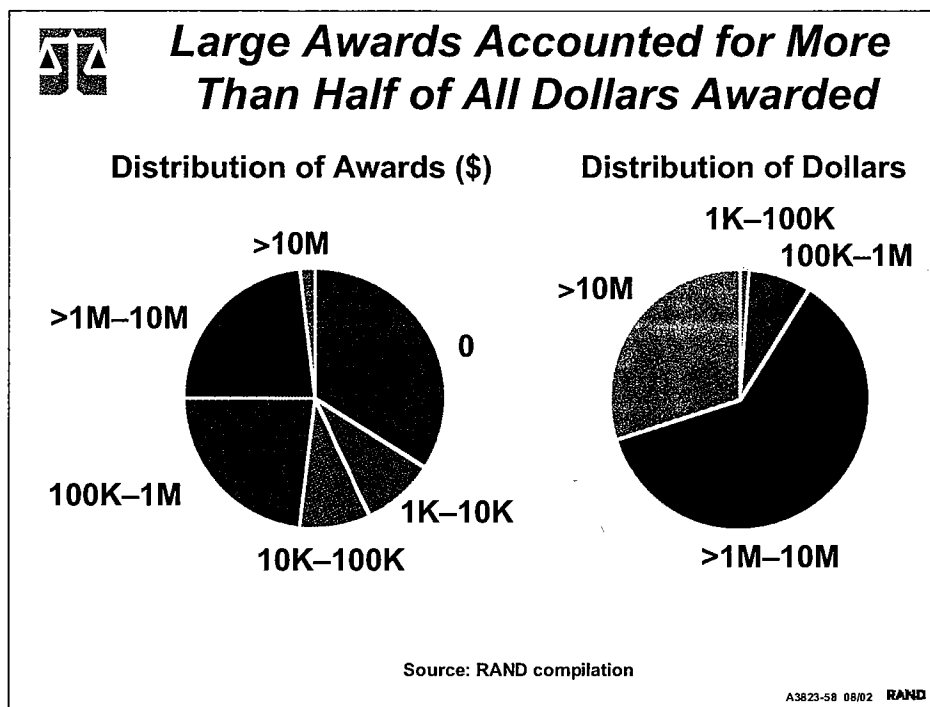
Using Mealey's Litigation Report on asbestos, we have identified all trial verdicts from 1993 to 2001. During that time, relatively few asbestos cases have reached verdict: there have been 527 trial verdicts involving 1598 plaintiffs. (There are more plaintiffs reaching verdict than trials because many trials involve multiple claims.) Although civil trial verdicts are becoming increasingly rare nationwide, the asbestos trial rate seems substantially lower than the norm. (Calculating a trial rate for asbestos suits is complicated because most claims are brought against scores of defendants, some of whom may settle and some of whom will contest cases up to verdict. Moreover, different defendants will settle at different times.)

The number of plaintiffs whose cases have been tried to verdict has decreased dramatically since 1993, from almost 500 to just over 150 in 2001. Mesothelioma and other cancer claims were more likely to reach trial than claims for nonmalignant diseases. However, 62 percent of all claims tried to verdict were for nonmalignant diseases.

About two-thirds of plaintiffs whose claims reached verdict from 1993 to 2001 won an award, somewhat higher than the rate of plaintiff success nationally in all tort suits and substantially higher than the rate of plaintiff success in product liability suits in many metropolitan jurisdictions (Moller, 1996). Mesothelioma plaintiffs were most likely to be successful (75 percent won an award), but more than half of claims for conditions other than cancer and asbestosis were also successful.



Across the period, about half the plaintiffs' claims that reached verdicts were tried together with other claims, some in groups of two to five but a significant fraction in groups of six or more. In about 10 percent of all the trials that went to verdict, a single jury heard a dozen or more plaintiffs' claims. Moreover, the liability decisions reached in some group trials, including trials where juries heard a smaller number of claims, applied to hundreds, or thousands, of other claims. The prevalence of multi-plaintiff trials is highly unusual for product liability cases.

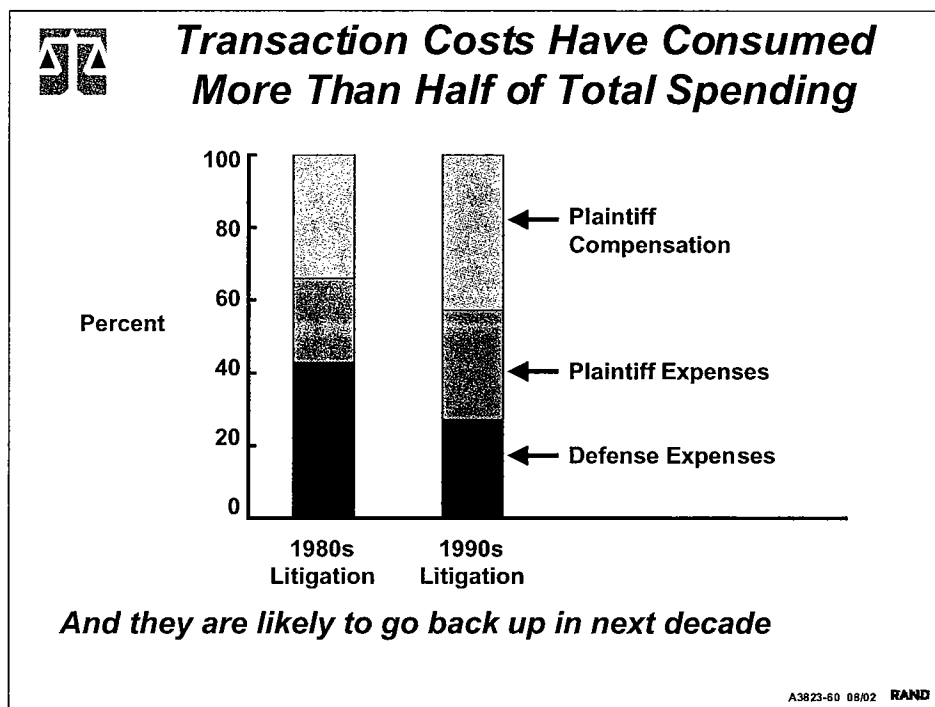


The mean verdict for successful plaintiff claims over the period was about \$1.8 million. During this period, mean product liability awards in some jurisdictions were considerably higher, while some were considerably lower (Moller, 1996). But mean awards varied substantially by disease category, from \$3.8 million for mesothelioma claims (higher than mean product liability awards in many metropolitan jurisdictions) to \$322 thousand for nonmalignant diseases other than asbestosis. The mean award for successful asbestosis claims topped \$1.6 million. The mean award for successful mesothelioma claims rose dramatically from about \$2 million in 1998 to upwards of \$6 million in 2001, while the mean award for successful asbestosis claims increased five-fold, from \$1 million in 1999 to \$5 million in 2001.

Just over half the plaintiffs whose claims reached verdict were awarded several hundred thousand dollars or more. About one-quarter of the successful plaintiffs were awarded in excess of a million dollars. As in most tort litigation, very large awards account for the lion's share of all the money awarded.

Not surprisingly, very large awards attract considerable attention. In August 2001, in what was described as the "largest asbestos verdict to date," a jury in El Paso, Texas awarded \$55.5 million, including \$15 million in punitive damages, against Kelly-Moore Paint Company to a mesothelioma victim and his family.

In September, a jury in Orange, Texas, awarded five workers with claims ranging from lung cancer to asbestosis \$130 million, including \$60 million punitive damages. In October, a Mississippi jury awarded \$150 million to six workers with asbestosis claims. Local media reported that “none [of the six plaintiffs] actually has asbestosis.” Even though very large awards may be reduced by remittitur or appeal, they reverberate through settlement negotiations and, importantly, through the stock market and investment analyst community.



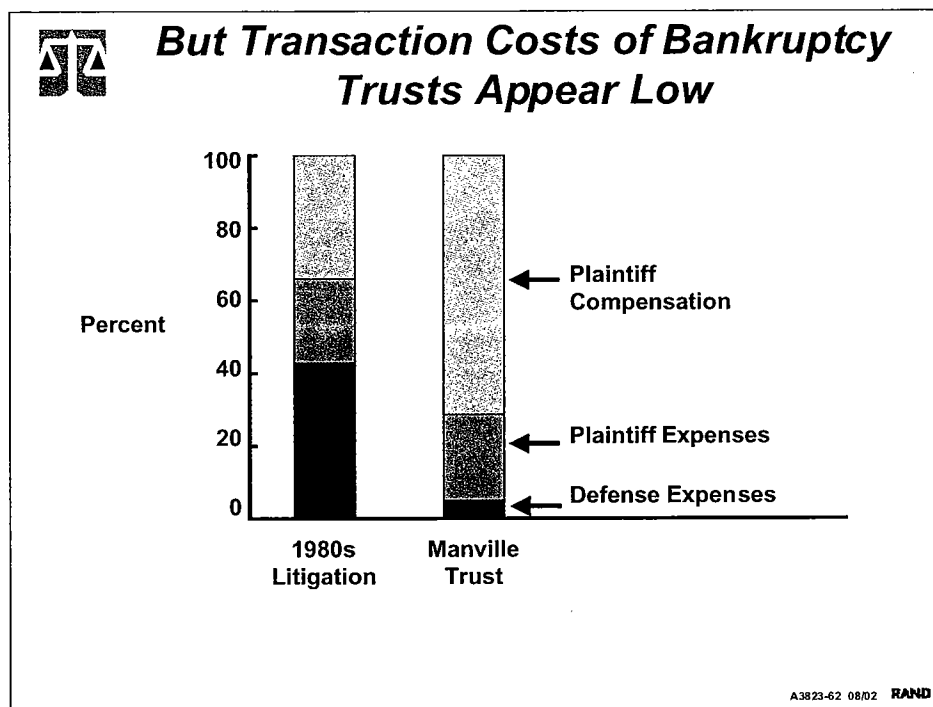
How much of the money that has been paid out in asbestos litigation was consumed by transaction costs—defense loss adjustment costs and plaintiffs' attorney fees and expenses—and how much went to injured parties? The earlier RAND study (Kakalik et al., 1983) concluded that injured parties ended up with 37 cents of every dollar spent in asbestos litigation.

However, the transactions costs associated with asbestos litigation soon grew as a fraction of total asbestos spending. The asbestos environment in the 1980s was highly litigious: Defendants disputed among themselves regarding responsibility for the asbestos at a site; defendants and insurers disputed over a host of coverage issues; and plaintiffs, defendants, and insurers vigorously disputed issues of causality, illness, etc. As a result, defense transactions costs increased and the share of total spending that claimants recovered net of their legal fees and expenses fell to about 34 percent of the total.

A number of these issues were essentially worked out in the late 1980s and early 1990s in the form of formal judicial decisions, agreements among defendants and insurers regarding joint defense efforts and coverage issues, and agreements between some plaintiffs' attorneys and defendants to settle claims according to a schedule of payments by claim type. These arrangements led to reduced defense litigation costs.

Using the same methods Kakalik et al. (1983) used in the earlier RAND study, we examined the data we obtained from defendants. We found that in the 1990s, a smaller fraction of what defendants spent on asbestos litigation went to defendants' and insurers' loss adjustment expenses. But the proportion of the money paid claimants that went to plaintiffs' attorneys remained the same. (Many of the people we interviewed said they had not seen any evidence that plaintiff attorneys' fees were reduced.) Consequently, the fraction of the dollars spent on asbestos litigation paid to claimants net of their legal fees and expenses increased in the 1990s, but claimants' net recovery of about 43 percent of total asbestos spending was still less than half the total.

Virtually all of our interview respondents discussed what they see as new instabilities in asbestos litigation. Many interviewees noted that the Center for Claims Resolution (CCR), the leading example of asbestos defendant cooperation, has ceased settling claims against its members. At the same time, interviewees told us, many defendants' agreements with plaintiff law firms were under reconsideration or being renegotiated. In particular, we have been told that a number of defendants are moving away from block settlements of large groups of claims and looking in more detail at individual claims on their merits. Plaintiff firms were said to be pursuing more adversarial strategies. And a number of those we interviewed believe that in response to the changing dynamics, there will be new insurance coverage battles. No one we interviewed offered us qualitative or quantitative information about changes in transaction costs resulting from these new sources of instability. But all of these factors have significant potential to influence transaction costs, and it seems likely that they will increase, at least temporarily, as a result. Because some of these issues may take several years to resolve, such a period of higher costs could be relatively long.



Once an asbestos defendant corporation is reorganized and a trust is established to assume its liabilities, claims processing procedures are largely administrative rather than adversarial. This should lead to dramatically lower transaction costs, and, in the case of the Manville Trust, experience confirms this intuition. From 1994 to 2000, the Manville Trust reported annual average operating expenses (not including special expenses associated with tobacco litigation) of about \$10 million, about 5 percent of the total dollars paid out to asbestos claimants plus expenses during this period. The Manville Trust also requires that attorneys representing claimants who file claims against it charge a fee of no more than 25 percent. Our interviewees report that attorneys generally adhere to that requirement. Assuming these expense ratios are correct, people who file claims against the Manville Trust receive about 70 percent of the total dollars spent by the Trust. However, it must be noted that the funds available to these trusts are limited. The money may be being paid in a much more efficient way, but the amount paid to any particular claimant is much less than would have been paid in litigation, given what other claimants are being paid for the same kinds of claims. Moreover, most trusts do not limit attorneys' fees.



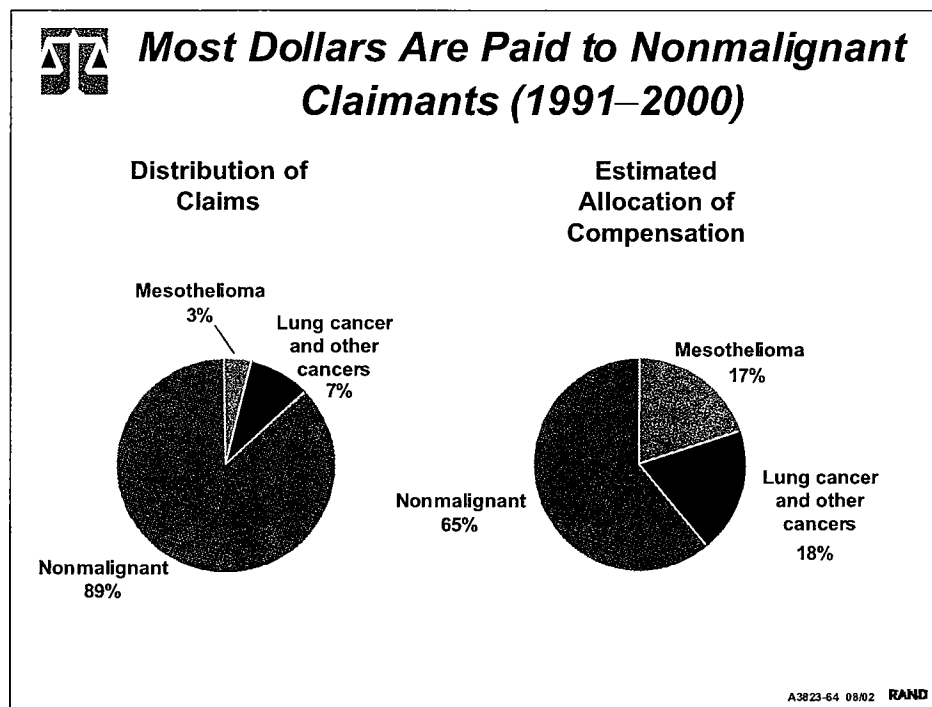
### ***It Is Difficult to Determine What an Individual Claimant Receives***

- **Only plaintiffs and their attorneys know how much claimants receive (net)**
  - **Claimants receive money from multiple sources over long time periods**
  - **Defendants pay different amounts for same injuries**
  - **There are wide variations by jurisdiction**
  - **Most of the data are not public**
- **But some aggregate distributional data are available**

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As noted above, we estimate that total spending on asbestos personal injury claims through 2000 was about \$54 billion. About \$33 billion, or 61 percent of the total, has been spent on defense and claimants' transactions costs. Claimants' net recovery has been about \$21 billion.

At this point we do not know what individual claimants receive, net of their attorneys' fees. Nor do we know how a claimant's net compensation varies with claimed injury. We have begun a follow-on study in which we will survey the defendants' and plaintiffs' attorneys for a sample of individual claimants to determine what the individual claimants actually received after paying their legal bills.



As noted earlier, we combined the data we obtained from a number of major defendants to estimate the distribution of diseases among claimants. Because one or another of these defendants is named on the vast majority of asbestos claims, the distribution of claims by type against them is generally representative of the distribution of claims among all asbestos claimants. The pie chart on the left shows the distribution of claims by type over the period from 1991 to 2000.

Generally, mesothelioma claims are paid the most, other malignancy claims an intermediate amount, and nonmalignant claims the least. For example, a defendant might pay three times as much for a mesothelioma claim as for a claim for another cancer and ten times as much for a mesothelioma claim as for a nonmalignant claim. The ratio of claim values by type apparently reflects perceptions of the relative trial values of such cases. The exact value paid for a particular case may also be influenced by the plaintiff's attorney (e.g., perceived litigation competence, risk aversion), the defendant (e.g., insurance availability, cash flow limits), and the jurisdiction of the case.

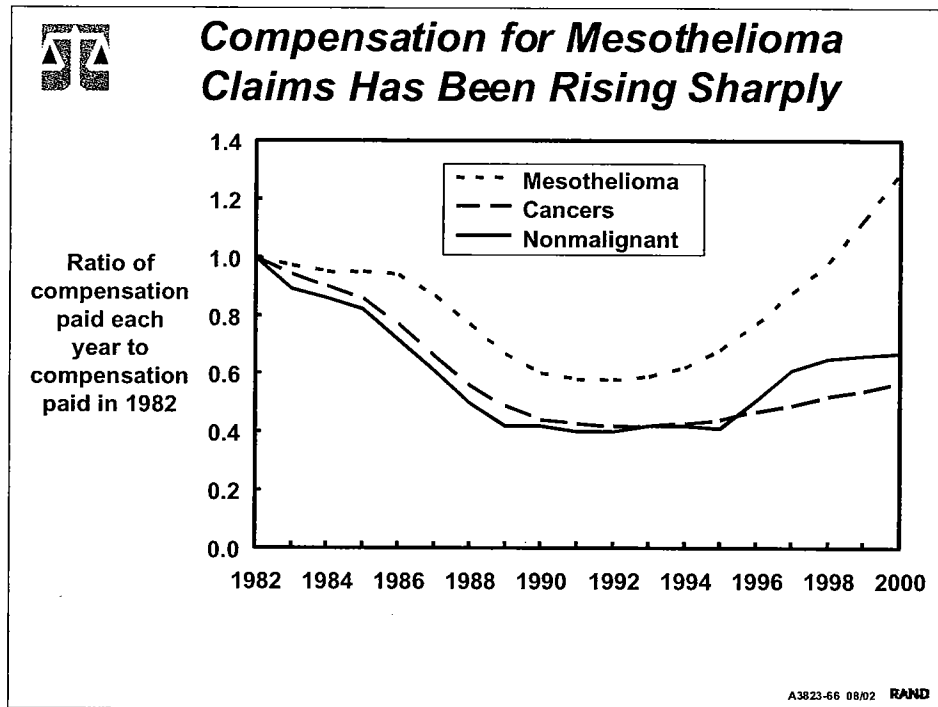
At a meeting of casualty actuaries in May 2001, analysts from Tillinghast-Towers Perrin presented estimates of the relative average compensation provided claimants across the country for mesothelioma, other cancer, and all nonmalignant claims combined from 1991 to 2000 (Angelina and Biggs, 2001). The estimates were developed using a sophisticated model for projecting potential asbestos bodily injury liabilities developed by Cross and Doucette (1997). Tillinghast-Towers Perrin provides actuarial services to a number of



clients regarding their potential asbestos liabilities. In the course of this work, they had access to sufficient data to estimate the ratios of claims payments by disease category. We applied their estimates of the relative compensation provided claimants with different conditions to the distribution of claimants by category (shown in the pie chart on the left) to estimate how the total amount provided to asbestos claimants to date has been divided among the categories. The results of these calculations are shown in the pie chart on the right

Mesothelioma claims accounted for about three percent of total claims and received about 17 percent of the dollars. About seven percent of claims over this period were for cancers other than mesothelioma; these claimants received about 19 percent of the dollars. Nonmalignant claims accounted for about 89 percent of claims and 65 percent of the dollars. These are averages over a nine-year period.

The Claims Resolution Management Corporation recently published the distribution of the Manville Trust's claims payments by disease category from 1995 through 2001. (Austern, 2002) Their experience over the last seven years has been almost identical to the results we obtained. Mesothelioma claims accounted for about four percent of the total claims paid by the Trust over that period. About 20 percent of the dollars paid by the Trust over that period went to Mesothelioma claimants. About eight percent of the Trust's claims over this period were for cancers other than mesothelioma; these claimants received about 16 percent of the dollars. Nonmalignant claims accounted for about 88 percent of claims and 64 percent of the dollars.



This chart shows the average amount that the defendants who provided data to us paid in compensation for each type of disease. Note that it shows what individual defendants paid in nominal dollars, on average, in each year relative to what they paid in 1982. The total amount any claimant received depends on the number of defendants who paid compensation to that claimant.

Defendants' average compensation payments for all types of claims declined through the 1980s, bottomed out in the early 1990s, and increased into the late 1990s. The amounts paid to mesothelioma claimants grew dramatically through the 1990s.

These results were confirmed in our interviews with participants in the litigation, including both plaintiff and defense attorneys. They told us that the ratio between mesothelioma and other injury claims for non-bankrupt defendants has widened considerably in the past few years. Moreover, some interviewees said that settlement values have increased substantially in particular jurisdictions, and they suggested that filing patterns have shifted over time, in part because of this trend. Taken together, these comments suggest that the relative sizes of different portions of the pie chart shown on the right in the previous slide could change substantially over time.



## ***Bankruptcies Affect Patterns of Compensation***

- **Current claimants lose**
  - **Many get tiny fraction of agreed-upon losses**
  - **May take years for them to receive payments**
- **Future claimants may gain**
  - **Bankruptcy trusts have fiduciary responsibility to pay future claimants**
- **Non-bankrupt firms become target of more litigation**

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Bankruptcy has a decided effect on compensation patterns. During the bankruptcy process, claimants are not paid. And once a corporation emerges from bankruptcy reorganized and a trust established, significantly fewer dollars are available for claims and thus claimants are paid less. Because illness from asbestos exposure is characterized by long latency periods, it is likely that claimants will continue to come forward years into the future. The trusts are required to provide for future claimants and, consequently, are generally concerned about being sure there will be money for future claimants. The fact that many of the trusts pay only pennies on the dollar is one of the reasons why the litigation is spreading to greater numbers of defendants. If claimants cannot get adequate compensation from the former deep pockets, they must look for greater compensation from other defendants or pursue additional defendants.

The costs of bankruptcy for current claimants can be easily inferred from bankruptcy reorganization plans. These plans establish the amount due a claimant—in bankruptcy parlance, the “full liquidated value” of a claim—for each type of injury and then agree to pay some fraction of that value on each claim, typically a tiny fraction of its liquidated value. For example, the Manville Trust announced in July 2001 that in order to preserve the Trust’s resources to pay future claims, it would reduce the fraction of liquidated claim value it pays to 5 percent (Austern, 2001). Previously, the Trust had been paying claims at 10 percent of their liquidated value. Trusts typically pay lower than liquidated value on current claims in order to preserve funds for paying future claims.

We have collected information on the length of time from bankruptcy petition to confirmation of the reorganization plan for 11 major asbestos defendant bankruptcies. The average length of time from petition to confirmation for these 11 bankruptcies is six years, but three bankruptcies (National Gypsum, Keene, Rock Wool) took only three years and one (48 Insulations) took 10 years. However, these numbers do not accurately portray the length of time it has taken some corporations to move from bankruptcy petition to paying claimants. Johns-Manville filed its petition in 1982, which was finally approved six years later, in 1988 (Matter of Johns-Manville Corp., 68 B.R. 618 [Bankr. S.D.N.Y. 1986], *aff'd* in part, *rev'd* in part, Kane v. Johns-Manville Corp., 843 F.2d 636 [2<sup>nd</sup> Cir. 1988]). Payments began then but were suspended in 1990 (Smith, 1990) and did not resume again until 1995, 13 years after Manville's initial filing (in re Joint Eastern and Southern Districts Asbestos Litigation, 878 F. Supp. 473 [E.D.N.Y. 1995, *aff'd* in part, vacated in part, 78 F.3d 764] [1996]). The Amatex reorganization plan was confirmed eight years after filing of the petition, but the Amatex Trust did not become operational until six years after that, or 14 years from the time the petition was first filed.

Because bankruptcy stays litigation against the bankrupt corporation and many corporations have recently entered bankruptcy, a considerable sum of money for paying current asbestos claims has been "taken off the table." In response, plaintiff attorneys told us that they are asking non-bankrupt defendants to pay more money on claims filed against them than previously negotiated. In addition, some plaintiff attorneys are identifying new defendants in industries where workers have not previously come forward in great numbers to claim compensation for asbestos injuries. Some plaintiff attorneys are also developing new legal theories on which to base claims against defendants who may not have been sued previously for asbestos injuries. Defense counsel told us that their clients were faced with higher costs to resolve asbestos claims than they had anticipated. As a result, they said, some defendants would abandon previous settlement practices intended to avoid litigation costs and pursue more aggressive—and more expensive—litigation strategies.



### ***What's Going on Today?***

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<b>Total costs to date (nominal \$)</b>	<b>\$1 B</b>	<b>\$54 B</b>
<b>Bankruptcies</b>	<b>3</b>	<b>?</b>
<b>Estimated future costs (nominal \$)</b>	<b>\$38 B</b>	<b>?</b>

A3823-69 08/02 **RAND**



## ***Dimensions of the Litigation***

- Claims
- Costs and compensation
- • Economic effects
- Future outlook

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## ***Bankruptcies Are Becoming More Frequent***

- **First three bankruptcies occurred in 1982**
- **13 more in the rest of the 1980s**
- **9 in the first half of the the 1990s**
- **9 in the second half of the 1990s**
- **22 since January 1, 2000**
- **4 dates to be determined**

A3823-71 08/02 RAND

The present and prospective future costs of asbestos litigation have led a substantial number of firms to file for bankruptcy. Sixteen corporations entered Chapter 11 because of asbestos litigation in the 1980s. Three of them filed in one year, 1982. The 1990s saw approximately the same number of Chapter 11 filings, 18, evenly spread over the decade in the sense that half occurred between 1990 and 1994 and the other half between 1995 and 1999. But asbestos bankruptcies then accelerated: There have been more filings since 2000, at least 22 through July 2002, than there were in either of the prior two decades. We are aware of another four asbestos-related bankruptcies for which we have not yet been able to identify the filing date.

Because corporations file petitions for bankruptcy and include their reasons for filing in these petitions, it is possible to determine the number of bankruptcies associated with asbestos litigation from public records. But published counts of the number of companies that have filed for bankruptcy as a result of asbestos litigation vary somewhat. A bankruptcy can involve a parent company and one or more of its subsidiaries, and some analysts count each entity separately in their total. Our tally, however, counts a parent and any of its subsidiaries as one bankruptcy. Furthermore, because the litigation has touched so many companies, there are asbestos defendant companies that have filed for bankruptcy for reasons unrelated to asbestos litigation. To the best of our knowledge, our tally includes only those companies for which asbestos litigation was the primary reason for filing.



## ***Costs of Bankruptcy Can Be Substantial***

- **Transaction costs of bankruptcy reorganization are generally about 3% of firm value**
- **Bankruptcy imposes other costs**
  - **Disrupts relationships with suppliers and customers**
  - **Impairs (or eliminates) access to credit**
  - **Distracts managers' attention**
- **After reorganization, the bankruptcy trust may hold all or most of the firm's equity**

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There has been considerable previous research on the costs of bankruptcy reorganization (Franks and Touros, 1989; Weiss, 1990; White, 1996). This literature shows that the cost is equal to about three percent of a firm's value (defined as book value of debt plus market value of equity). But to date, no one has studied the costs of asbestos bankruptcy reorganization. The bankruptcies that have been studied involved large publicly traded corporations comparable in size to large asbestos defendant corporations. But reorganization costs for asbestos defendants may be higher than the three percent of firm value reported in these earlier studies because none of the studied bankruptcies included massive numbers of tort creditors.

Various other bankruptcy-related costs also impinge on a firm's ability to do business.

Finally, as noted earlier, those companies that have emerged from bankruptcy have emerged in the form of a reorganized company and a trust, the latter generally using essentially all of shareholders' value to pay off future claims. Bankruptcy is a very expensive proposition for shareholders.





## ***And Bankruptcy Is Only Part of the Story***

- Defendants' net payments to asbestos claimants weaken their financial position, cost jobs
- Upper-bound estimates of effects on defendants:

	<u>Today</u>	<u>Eventually</u>
Reduced level of investment	\$10 B	\$33 B
Jobs not created	138,000	423,000

- However, other firms' reactions may offset the overall effects on the economy

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Moreover, bankruptcy is not the only economic effect of asbestos litigation. Some defendants that have not filed for bankruptcy have said that asbestos litigation has been a major drain on their resources. To finance investments in new plant and equipment, most firms first use their retained earnings. Only when firms have more good investment opportunities than they can finance from retained earnings do they turn to external sources of finance, such as loans or new equity issues. For asbestos defendants, each dollar paid out in defense costs and damage awards or settlements reduces retained earnings. As a result, these firms have fewer internal dollars available to finance investment. They may respond by reducing their investment levels, either limiting investment to what can be financed using retained earnings or, if they borrow externally, eliminating investments that are unattractive because of the higher cost of capital. Reductions in investment levels, in turn, can lead to reductions in the creation of new jobs. The point is that bankruptcy *per se* is not the only effect of asbestos litigation costs on the financial condition of defendant firms.

We can estimate the effects of asbestos litigation costs on defendant firms. These estimates are upper bounds of the effects on all firms; the true figures could be substantially lower. We earlier observed that we believe defendants have spent approximately \$23 billion on asbestos litigation. According to Fazzari, Hubbard & Petersen (1988), a \$1 dollar reduction in a firm's retained earnings will, on average, lead to a reduction of 42 cents in its investments. By this estimate, a reduction of \$23 billion in retained earnings would have caused these firms to

reduce their investment levels by up to \$10 billion. Tillinghast-Towers Perrin analysts have estimated that the total costs of asbestos litigation will eventually reach \$200 billion, of which asbestos defendants will pay 39 percent or \$78 billion (Angelina and Biggs, 2001). The Fazzari, et al. approach predicts a reduction in investment by asbestos defendants that will eventually amount to \$33 billion.

We can convert these predicted figures into estimates of the number of jobs asbestos defendant firms would have created had they not reduced their investments. The average capital-to-labor ratio in U.S. durable goods manufacturing is \$78,000. (This estimate is based on the value of the capital stock in durable goods manufacturing, which was \$861 billion in 1998, and the labor force in durable goods industries, which was 10,985,000 in 1999. The figure of \$78,000 for the average capital-to-labor ratio in durable goods manufacturing is the quotient (U.S. Department of the Census, 2000, Tables 684 and 888). If, on average, one less job is created each time a firm reduces its investment levels by \$78,000, the number of jobs not created because asbestos defendants spent \$10 billion less on investment up to the year 2000 would be approximately 128,000. Also, the number of jobs that defendants would have created if they had not had to reduce their capital investments by \$33 billion is estimated to be 423,000.

The money paid to asbestos claimants and attorneys does not disappear. They will likely save some of those funds. Their savings, in turn, will enter capital markets and become available to firms seeking investment funds. Thus, some of the funds removed from capital markets when retained earnings are used to compensate asbestos claimants return to those markets. Similarly, the number of jobs lost to the economy as a whole as a result of the adverse effect of asbestos litigation on defendants' investments could be at least partially offset by jobs created by firms that are able to make investments they could only afford because claimants and their attorneys saved some of the funds they obtained from defendants. Because it seems unlikely that claimants and attorneys will save or invest 42 percent of what they obtain from asbestos litigation, it would seem that the litigation will result in some reduction in investments and job creation. But we lack the data needed to estimate the impact of the litigation on the economy as a whole.